

Version: V1.00.000

Statement:

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Using This Manual

This manual contains device usage instructions.

Some illustrations shown in this manual may contain modules and optional equipment that are not included in your system.

The following conventions are used.

Bold Text

Bold text is used to highlight selectable items such as buttons and menu options.

Example:

Tap **OK**.

Notes and Important Messages

Notes

A NOTE provides helpful information such as additional explanations, tips, and comments.

Example:

 Note: Remember to remove the VCI connector from the vehicle's DLC after use.

Warning

Warning indicates a hazardous situation which, if not avoided, could result in minor or moderate injury to the operator or to bystanders.

Example:

 Warning: Retrieving and using DTCs for troubleshooting vehicle operation is only one part of an overall diagnostic strategy. Never replace a part based only on the DTC definition. Each DTC has a set of testing procedures, instructions and flow charts that must be followed to confirm the location of the problem. This information can be found in the vehicle's service manual.

Danger

Danger indicates an imminently or potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

Example:

 Danger: If you must drive the vehicle in order to perform a troubleshooting procedure, always have a second person help you. Trying to drive and operate the

diagnostic tool at the same time is dangerous, and could cause a serious traffic accident.

Illustrations

Illustrations used in this manual are samples, the actual testing screen may vary for each vehicle being tested. Observe the menu titles and on-screen instructions to make correct option selection.

Important Safety Precautions

To avoid personal injury, property damage, or accidental damage to the product, read all of the information in this section before using the tool.

DANGER

- When an engine is operating, keep the service area well-ventilated or attach a building exhaust removal system to the engine exhaust system. Engines produce various poisonous compounds (hydrocarbon, carbon monoxide, nitrogen oxides, etc.) that cause slower reaction time and result in death or serious personal injury.
- Please use the included battery and power adaptor. Risk of explosion if the battery is replaced with an incorrect type.
- DO NOT attempt to operate the tool while driving the vehicle. Have second personal operate the tool. Any distraction may cause an accident.

WARNING

- Always perform automotive testing in a safe environment.
- Do not connect or disconnect any test equipment while the ignition is on or the engine is running.
- Before starting the engine, put the gear lever in the Neutral position (for manual transmission) or in the Park (for automatic transmission) position to avoid injury.
- NEVER smoke or allow a spark or flame in vicinity of battery or engine. Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases, or heavy dust.
- Keep a fire extinguisher suitable for gasoline/chemical/electrical fires nearby.
- Wear an ANSI-approved eye shield when testing or repairing vehicles.

- Put blocks in front of the drive wheels and never leave the vehicle unattended while testing.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltage when the engine is running.
- To avoid damaging the tool or generating false data, please make sure the vehicle battery is fully charged and the connection to the vehicle DLC (Data Link Connector) is clear and secure.
- Automotive batteries contain sulfuric acid that is harmful to skin. In operation, direct contact with the automotive batteries should be avoided. Keep the ignition sources away from the battery at all times.
- Keep the tool dry, clean, free from oil, water or grease. Use a mild detergent on a clean cloth to clear the outside of the equipment when necessary.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Store the tool and accessories in a locked area out of the reach of children.
- Do not use the tool while standing in water.
- Do not expose the tool or power adapter to rain or wet conditions. Water entering the tool or power adaptor increases the risk of electric shock.
- This tool is a sealed unit. There are no end-user serviceable parts inside. All internal repairs must be done by an authorized repair facility or qualified technician. If there is any inquiry, please contact the dealer.
- Keep the tool far away from magnetic devices because its radiations can damage the screen and erase the data stored on the tool.
- Do not attempt to replace the internal rechargeable lithium battery. Contact the dealer for factory replacement.
- Do not disconnect battery or any wiring cables in the vehicle when the ignition switch is on, as this could avoid damage to the sensors or the ECU.
- Do not place any magnetic objects near the ECU. Disconnect the power supply to the ECU before performing any welding operations on the vehicle.
- Use extreme caution when performing any operations near the ECU or sensors. Ground yourself when you disassemble PROM, otherwise ECU and sensors can be damaged by static electricity.
- When reconnecting the ECU harness connector, be sure it is attached firmly,

otherwise electronic elements, such as ICs inside the ECU, can be damaged.

FCC Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC RF Exposure Information (SAR)

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the United States.

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines.

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1 Introduction

1.1 Product Profile

This asTech All-In-One diagnostic tool is a new Android-based vehicle diagnostic tool. It is characterized by featuring powerful functions, and providing precise test result.

Through Bluetooth communication between the asTech Connect device (AJO-001) and diagnostic tablet, it achieves full car model and full system vehicle trouble diagnosis, which include Reading DTCs, Clearing DTCs, Reading Data Stream, Actuation Test and Special Functions.

It mainly has the following features: Diagnostics, AsTech (Remote diagnostics), Service Functions, I/M Readiness, Reports, Camera, DLC Voltage Check, Software Update, Can Bus Pin Detect, Local Assist, Diagnostic Feedback, and ADAS etc.

1.2 Package List

The following accessory items are only for reference. Please consult from the seller or check the package list supplied with the tool together.

No.	Item	Descriptions	Qt.
1	All-In-One diagnostic tablet	Indicates the test result.	1
2	asTech Connect (VCI) device	Collects vehicle data and sends it to the tablet for analysis.	1
3	VCI extension cable	Connects the VCI to the OBD II vehicle's DLC.	1
4	Power adaptor	For charging the tablet via AC outlet.	3
5	Type A to Type B data cable	Connects the VCI module to the tablet to perform vehicle diagnosis.	1

6	Type A to Type C data cable	Connects the tablet to a PC to exchange data.	1
7	Password envelope	A piece of paper bearing the product Serial Number and Activation Code for product registration.	1
8	Crossover cable	Connects the VCI device to the modem.	1

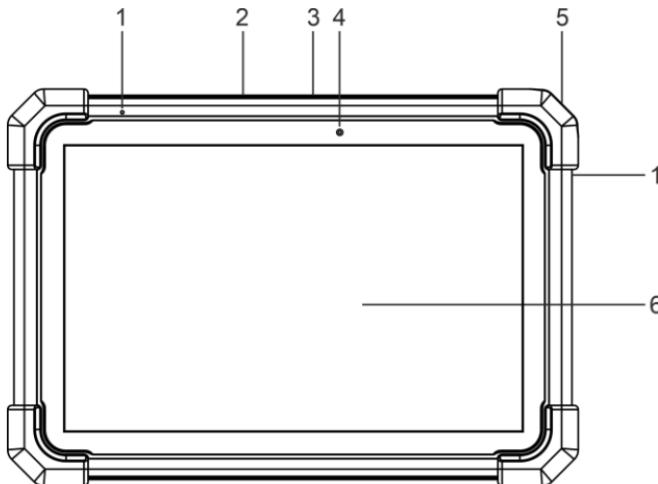
2 Components & Controls

There are two main components to the diagnostic system:

- All-In-One diagnostic tablet – the central processor and monitor for the system (See Chapter 2.1).
- asTech Connect device – the device for accessing vehicle data (See Chapter 2.2).

2.1 Diagnostic Tablet

The diagnostic tablet acts as the central processing system, which is used to receive and analyze the live vehicle data from the VCI and then output the test result.



1. Microphone

2. Type-A USB Port

- Connect to the VCI connector to perform vehicle diagnosis via the USB cable.
- Connect to USB storage devices.

3. Type-C USB Port

- Connect to AC outlet for charging.
- Connect to PC for data exchange.

4. Front Camera

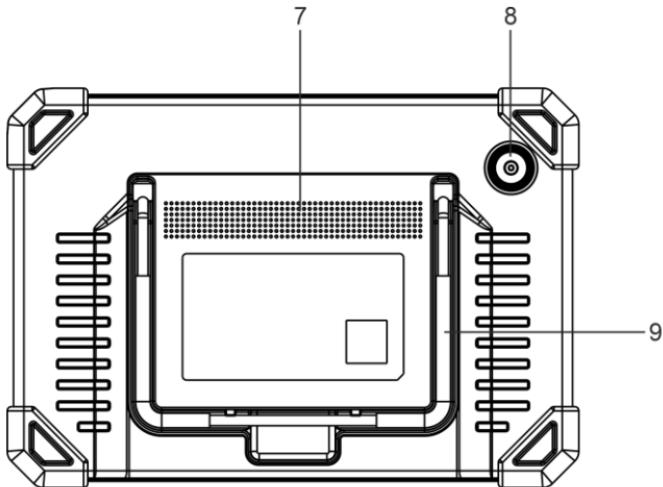
5. POWER Key

Turns on/off the tablet.

Note: Press and hold it for 8 seconds to perform forced shutdown.

6. LCD Screen

Indicate the test result.



7. Speakers

8. Rear Camera

9. Adjustable stand

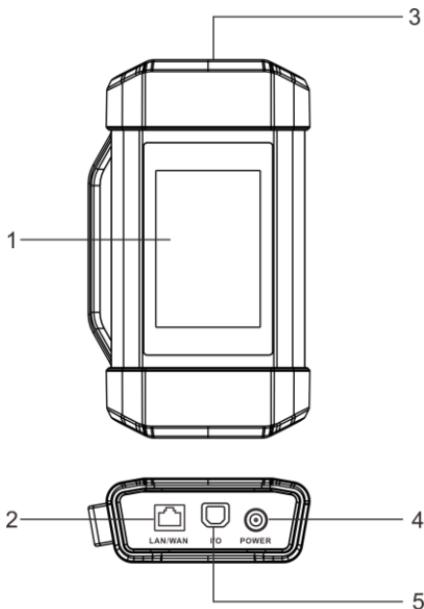
Flip it out to any angle and work comfortable at your desk, or hang it on steering wheel.

2.2 asTech Connect (VCI) Device

The asTech Connect (AJO-001) device features powerful functions and it can be applied in the following situations:

- 1). When as a VCI (Vehicle Communication Interface), it needs to work in conjunction with the **Diagnostics** module of the tablet, which is used to obtain vehicle data, and then send it to the tablet for analysis wirelessly or via data cable.
- 2). When as an asTech remote diagnostics Customer dongle, it does not communicate with the tablet, but it needs to work together with the **asTech** module of the tablet. The tablet is mainly used to issue remote diagnostic requests, and the asTech Connect dongle is networked to receive and execute commands from the remote asTech remote diagnostics Business.
Note: For detailed operations, please refer to Chapter 7.
- 3). When as a local J2534 PassThru device, it can be used in conjunction with the PC installed with OEM diagnostic software.

Note: For detailed operations, please refer to Chapter 11.



1. Touch screen

2. LAN/WAN port

Connect it to the Internet via the crossover cable. It only applies to the asTech Remote Diagnostics.

3. OBD-16 diagnostic connector

Connect it to the vehicle's DLC (Data Link Connector) port via the VCI extension cable.

4. DC-IN power jack

Currently disabled and for manufacturer use only.

***Warning:** The device obtains power through the vehicle's DLC, and it is prohibited to connect to an external DC power supply. No responsibility can be assumed for any damage or loss caused as a result of not strictly following the above method.

5. Data I/O port

Connect it to the tablet to perform vehicle diagnosis.

2.3 Technical Specifications

1. Diagnostic tablet

Operating system: Android

Memory: 4GB

Storage: 128GB

Screen: 10.1 inch capacitive touch screen with a resolution of 1280 x 800 pixels

Camera: Front-facing 5.0MP + Rear-facing 8.0MP camera

Connectivity

- Wi-Fi (802.11a/b/g/n/ac)

- Bluetooth

Size: 274*190.5*40.5mm

Working temperature 0°C~ 50°C

Storage temperature -20°C ~ 70°C

2. asTech Connect device

Working voltage: DC 9~36V

Power consumption: ≤ 6W

Size: 204*110mm *45mm

Communication: Bluetooth/Wi-Fi or data cable connection

Working temperature: 0°C~ 50°C

3 Initial Use

3.1 Charging & Turning On

1. Use the included power adaptor to charge the tablet.
2. After charging is complete, press the POWER button to turn the tablet on. The system starts initializing and then enters the home screen.

Note: If the battery remains unused for a long period of time or the battery is completely discharged, it is normal that the tool will not power on while being charged. Please charge it for a period of 5 minutes and then turn it on.

Warning: Please use the included power adaptor to charge your tool. No responsibility can be assumed for any damage or loss caused as a result of using power adaptors other than the one supplied.

Press [POWER] for 3 seconds, an option menu will pop up on the screen. Tap **Power off** to turn the tool off.

3.2 Screen Layout

There are five on-screen buttons available on the bottom of the screen.

 **Home:** Navigates to the Android's home screen.

 **Recent App:** Views the recently launched applications and running applications.

 **VCI Connection:** Shows whether the VCI device is properly connected or not.

 **Screenshot:** Captures the current screen.

 **Back:** Returns to the previous screen.

3.3 Basic Gestures



Single-tap: To select an item or launch a program.



Double-tap: To zoom in so that the text on a webpage appears in a column that fits your device's screen.



Long press: Tap and hold on the current interface or area until a contextual menu pops up on the screen, and then release it.



Slide: To jump to different pages.



Drag: Tap the application icon and drop it to other location.



Spread apart/pinch together: To zoom in manually, place two fingers on the screen and then spread them apart. To zoom out, place two fingers apart on the screen and then pinch them together.

3.4 Change System Language

The tool supports multiple system languages. To change the language of the tool, please do the following:

1. On the home screen, tap **Settings -> System -> Language & input -> Languages.**
2. Tap **Add a language**, and then choose the desired language from the list.
3. Tap and hold the desired language and drag it to the top of the screen and then release it, the system will change into the target language.

3.5 Adjust Brightness

Note: Reducing the brightness of the screen is helpful to conserve the battery power.

1. On the home screen, tap **Settings -> Display -> Brightness level.**
2. Drag the slider to adjust it.

3.6 Set Standby Time

If no activities are made within the defined standby period, the screen will be locked automatically and the system enters sleep mode to save power.

1. On the home screen, tap **Settings -> Display -> Advanced -> Sleep.**
2. Choose the desired sleep time.

3.7 Network Setup

The tablet has built-in Wi-Fi that can be used to get online. Once you're online, you can register your tool, surf the Internet, get apps, send email, launch the remote diagnosis, and check for software updates etc.

1. On the home screen, tap **Settings -> Network & Internet -> WLAN.**
2. Slide the Wi-Fi switch to ON, the tablet starts searching for available wireless networks.
3. Select a wireless network,
 - If the chosen network is open, the tablet will connect automatically.
 - If the selected network is encrypted, a network password will need to be entered.
4. When **Connected** appears, it indicates the Wi-Fi connection is complete.

Note: When Wi-Fi is not required, this should be disabled to conserve battery power.

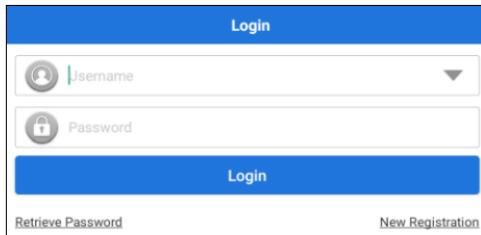
4 Getting Started

For new users, you will need to experience a user registration process before getting started.

4.1 Register & Update

Follow the steps below to proceed registration and update:

Tap the application icon on the home screen to launch it, and then tap **Login** to enter the login interface of diagnosis software.



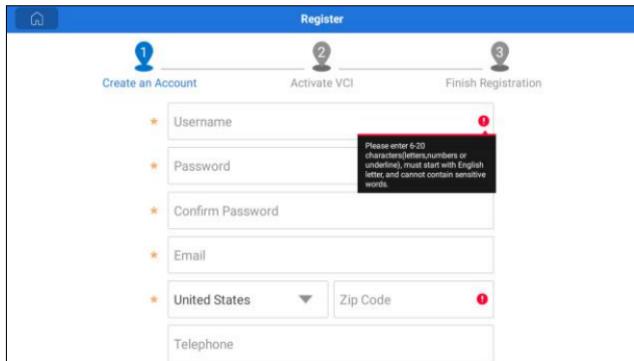
(If you are a new user, follow **A** to proceed.)

(If you have registered to be a member, go to **B** to login the system directly.)

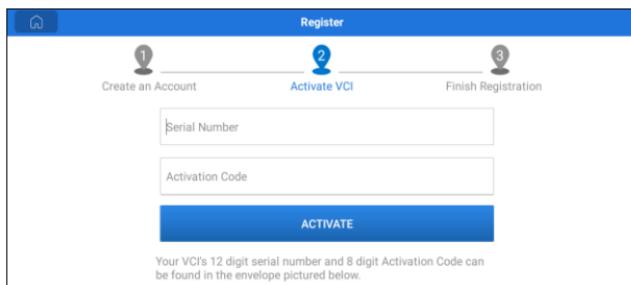
(In case you forgot password, refer to **C** to reset a new password.)

A. If you are a new user, tap **New Registration** to enter sign-up page.

1. Create an App Account: Input the information to create a new account (all fields must be completed). When finished tap **Register**, the following screen will appear:



2. Activate VCI: Input the Product Serial Number and Activation Code (can be found in the supplied Password Envelope), and tap **Activate** to go to the next step.



3. Finish Registration: Tap **OK** to navigate to the download page and download the diagnostic software.

Tap **Update** to start downloading. To pause downloading, tap **Stop**. After the downloading is complete, the system will install the software package automatically.

Note: When downloading the diagnostic software or checking for updates, make sure the tablet has a strong Wi-Fi connection. It may take a long time to finish it, please be patient to wait.

B. If you have registered to be a member, input your name and password, and then tap the **Login** button to enter the main menu screen directly.

Note: The tablet has an auto-save function. Once the username and password are correctly entered, the system will automatically store it. After initial setup, it is no longer necessary to input the account information manually to log in.

C. If you forgot the password, tap **Retrieve password** and then follow on-screen instructions to set a new password.

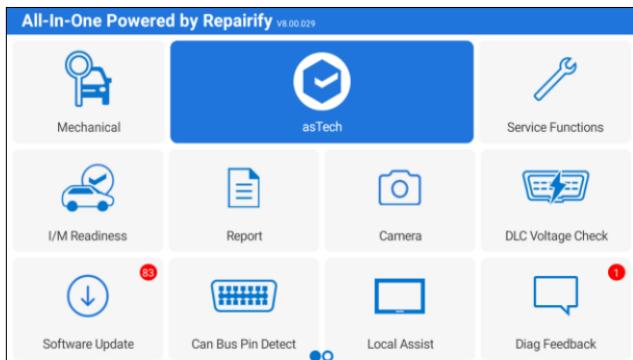
4.2 Job menu

There are 2 function modules available on the tablet: Diagnostics and Others.

Swipe in from the left/right edge of the screen to switch between function modules.

4.2.1 Diagnostics

It mainly includes the following items:

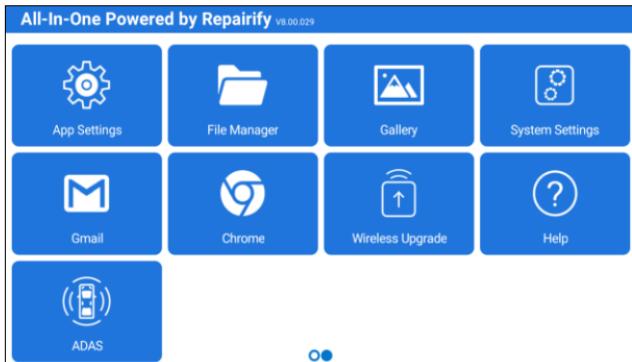


Name	Description
Mechanical	Configure the tablet as a professional diagnostic tool. Auto Detect and manual diagnosis are supported.
asTech	The asTech system is powerful remote diagnostics solution developed by Repairify, Inc. The system consists of asTech Connect C (Customer) dongle, asTech Service Platform and asTech Connect B (Business) dongle.

Service Functions	Offer coding, reset, relearning and more service functions, to help vehicles get back to functional status after repair or replacement.
I/M Readiness	Check whether or not the various emissions-related systems on the vehicle are operating properly, and ready for Inspection and Maintenance testing.
Report	Quick access to Shop module of the asTech app.
Camera	Take pictures or record videos.
DLC Voltage Check	Perform a check of the vehicle's battery to ensure the system is operating within acceptable limits.
Software Update	Update vehicle diagnostic software and APK.
Can Bus Pin Detect	Allows you to detect the voltage of the vehicle OBD II diagnostic socket pins and the supported protocol types to help technicians judge the OBD II diagnostic interface.
Local Assist	Coming soon.
Diag Feedback	To feed back the recent 20 diagnostic logs to us for issue analysis.
Profile	To manage VCI, reports, change password, configure printer, system settings and logout etc.

4.2.2 Others

It mainly includes the following items:



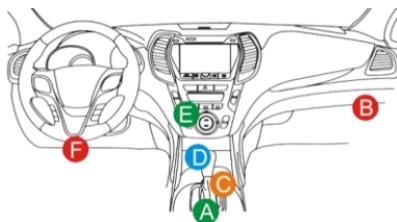
Name	Description
App Settings	Make some settings of the All-In-One app.
File Manager	A file & application manager, task killer and download manager.
Gallery	Take pictures and manage picture & screenshots library.
System Settings	Make some settings of the Android operating system.
Gmail	Get your emails instantly via push notifications, read and respond online & offline, and find any email quickly.
Chrome	A free cross-platform web browser featuring tools such as file downloads, password settings and bookmarks.
Wireless Upgrade	Upgrade the current operating system to the latest version via OTA (Over-the-Air) update.
Help	Check vehicle coverage and customer service etc.
ADAS	This module allows you to perform ADAS (Advanced Driver Assistance System) calibration operations. It needs to work with the specific ADAS calibration tool (sold separately).

4.3 Connections

4.3.1 Preparation

1. Make sure that the vehicle battery voltage is 11~14 and the ignition is turned on.
2. Find the vehicle's DLC location.

For Passenger Vehicles, The DLC (Data Link Connector) is usually located 12 inches from the center of the instrument panel, under or around the driver's side for most vehicles. For some vehicles with special designs, the DLC location may vary. Refer to the following figure for location.

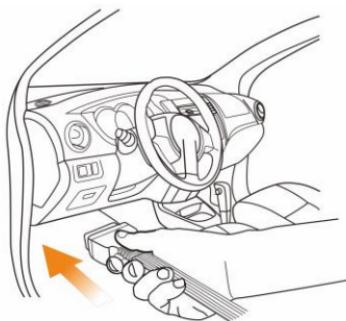


- A. Opel, Volkswagen, Audi
- B. Honda
- C. Volkswagen
- D. Opel, Volkswagen, Citroen
- E. Changan
- F. Hyundai, Daewoo, Kia, Honda, Toyota, Nissan, Mitsubishi, Renault, Opel, BMW, Mercedes-Benz, Mazda, Volkswagen, Audi, GM, Chrysler, Peugeot, Regal, Beijing Jeep, Citroen and other most popular models

If the DLC cannot be found, refer to the vehicle's service manual for the location.

4.3.2 Vehicle connection

For OBD II Vehicle, plug one end of the VCI extension cable into the vehicle's DLC, and the other end into the diagnostic socket of the VCI device.



4.4 Communication Setup

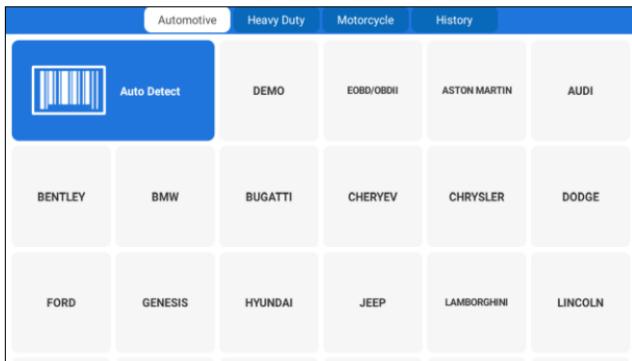
After the VCI device is successfully activated and powered on, the VCI device will pair with the tablet automatically. Users have no need to make any setting any more.

Once the communication failure occurs, the diagnostic app will pop up some prompt information. In this case, just follow the on-screen prompts to troubleshoot all possible causes.

5 Diagnosis

Three methods are available for vehicle diagnosis: Smart Diagnosis (AutoDetect), Manual Diagnosis and asTech Remote Diagnosis.

Tap **Diagnose** on the Job Menu to enter the Diagnose main menu.



1. Auto Detect: Obtain vehicle data from the cloud server to perform quick test via reading VIN, to avoid various defects resulting from step-by-step menu selection.
2. All Tab: Display all the vehicle makes in the vehicle menu.
3. Vehicle region buttons: Tap different buttons to switch to corresponding vehicles.
4. History: The History function provides direct access to the previously tested vehicles and users can resume from the last operation, without starting from scratch. Refer to Chapter 5.4 for details.

5.1 Smart Diagnosis (AutoDetect)

Through simple Bluetooth communication between the diagnostic tablet and VCI, you can easily get the VIN (Vehicle Identification Number) information of the currently identified vehicle. Once the VIN is successfully identified, the system will retrieve it from the remote server and then guide you to vehicle information page without step-by-step manual menu selection.

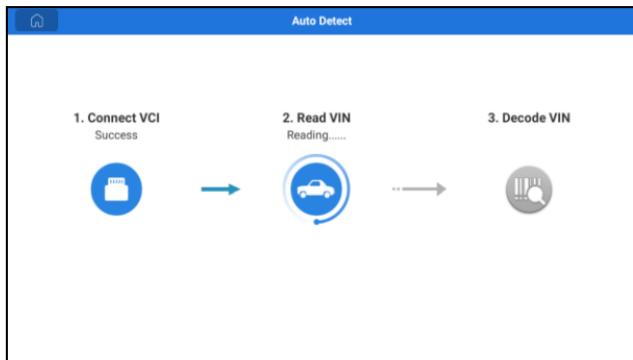
The vehicle information page lists all historical diagnostic records of the vehicle,

which lets the technician have a total command of the vehicle faults. In addition, a quick dial to local diagnosis and diagnostic function are also available on this page for reducing the roundabout time and increasing productivity.

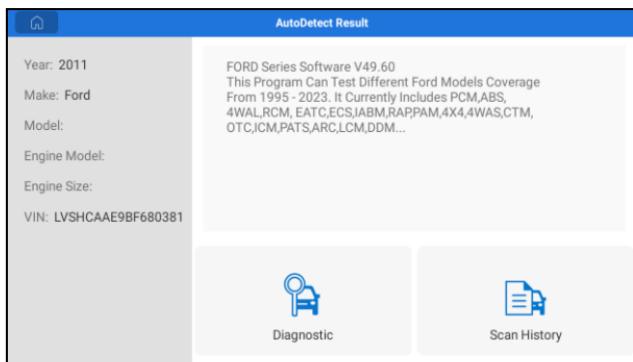
Note: Before using this function, please make sure the VCI is properly connected to the vehicle's DLC. For detailed connection, see Chapter 4.3.

Follow the steps below to proceed.

1. Tap **Auto Detect** on the Diagnose main menu screen.

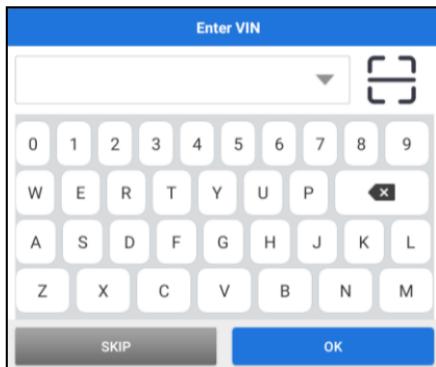


2. Once pairing is complete, the tablet starts reading the vehicle VIN.
 - A. If the VIN can be found from the remote server database, the following screen will appear.

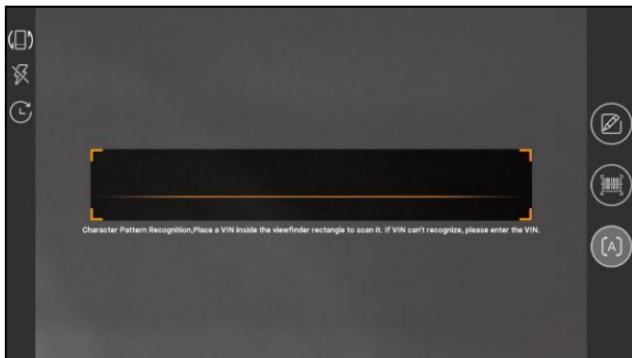


- Tap **Diagnostic** to start a new diagnostic session.

- Tap **Scan History** to view its historical repair record. If there are records available, it will be listed on the screen in sequence of date.
- B. If the tablet failed to access the VIN information, the following screen will appear:



- Tap the input field to directly, tap **OK**. If the VIN exists on the remote server, the system will enter the diagnostic function selection screen.
- Tap (□) to launch the VIN recognition module.

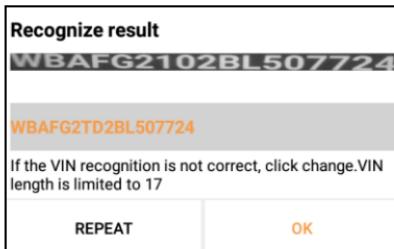


Place the VIN inside the viewfinder rectangle to scan it. The most recognizable location for this number is in the top left corner on the vehicle's dashboard. Other locations include the driver's door or post, and the firewall under the hood.

- Tap (□) to switch the display mode of the screen.

- Tap  to turn the camera flash on.
- Tap  to choose it from the record list if the VIN of the vehicle has been scanned before.
- Tap  to input the VIN manually if the tablet has failed to identify the VIN of the vehicle.
- Tap  to scan the VIN barcode. If the VIN barcode cannot be recognized, please manually input the VIN.
- Tap  to scan the VIN character. If the VIN character cannot be recognized, please manually input the VIN.

After scanning, the screen will automatically display the result.



- If the VIN scanned is incorrect, tap the result field to modify it and then tap **OK**.
- To scan it again, tap **REPEAT**.

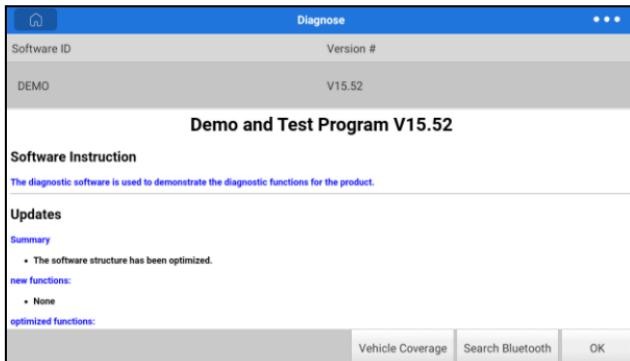
If the VIN exists on the remote server, the system will enter the diagnostic function selection screen.

5.2 Manual Diagnosis

In this mode, you need to execute the menu-driven command and then follow the on-screen instruction to proceed.

Take **Demo V15.52** as an example to demonstrate how to diagnose a vehicle.

- 1). Select diagnostic software version: Tap **DEMO** to go to Step 2.



On-screen Buttons:

Vehicle Coverage: Tap to view the vehicle models that the current diagnostic software covers.

Search Bluetooth: Tap to scan for all available Bluetooth VCIs.

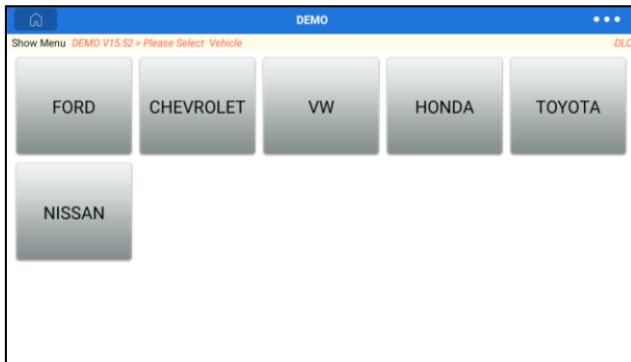
OK: Tap it to go to next step.

... contains a number of buttons that allow you to print the displayed data or make other controls. It is displayed on the upper right corner of the screen and goes through the whole diagnostic session. Below provides a brief description for the operations of the diagnostics toolbar buttons:

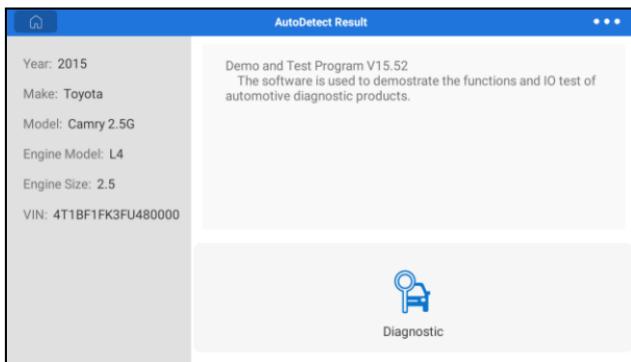
Print: Print the current screen. To perform printing, you need to purchase an extra Wi-Fi printer manufactured by LAUNCH or other manufacturers separately and then properly configure the wireless printer following the steps described in Chapter 10.8.

Exit: To exit the diagnostic application.

2). Select vehicle model (varies with different versions): Select the desired vehicle model. Here we take **TOYOTA** for example.

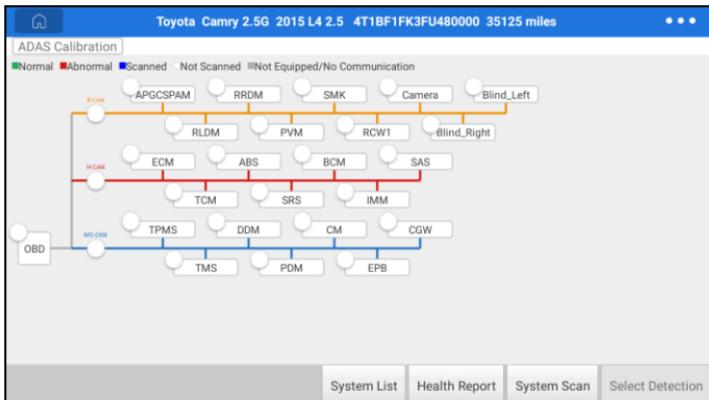


3). Read vehicle information: The system automatically decodes the vehicle information. After the vehicle information is retrieved, the following screen will appear.



4). Choose the test item: After reading the vehicle information, double check if the information is correct or not. If yes, tap **Diagnostic** to enter the following screen.

All vehicle systems can be displayed in form of topology or list. By default, all vehicle systems are displayed in form of topology.



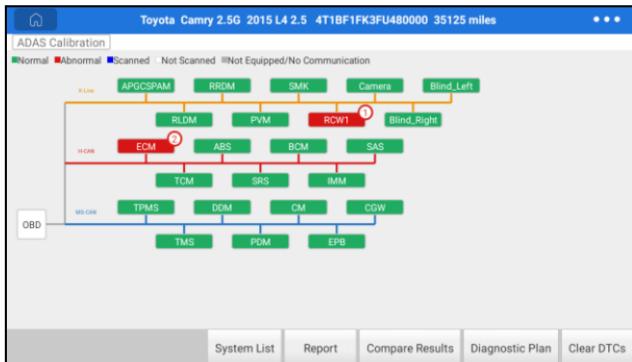
- 1) While in System Topology mode, different highlight bars indicate different detection status.

On-screen Buttons:

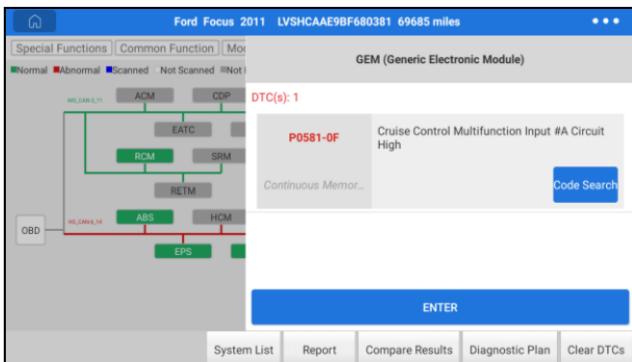
System List: Tap to display all vehicle systems in list form.

Health Report: Tap to quickly access all the electronic control units of the vehicle and generate a detailed report about vehicle health. The tested systems malfunctioning are displayed in red with a number indicator displaying DTC quantity and the systems with functioning properly are displayed in green.

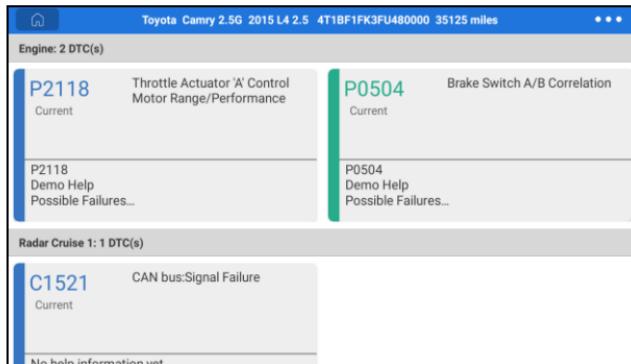
Note: Diagnostic Trouble Codes or Fault Codes can be used to identify which engine systems or components that are malfunctioning. Never replace a part based only on the DTC definition. Retrieving and using DTCs for troubleshooting vehicle operation is only one part of an overall diagnostic strategy. Follow testing procedures (in vehicle's service manual), instructions and flowcharts to confirm the locations of the problem.



- Tap the malfunctioning system to check the existing DTCs. Tap **ENTER** to perform other diagnostic functions.



- Report:** Tap to save the test result as a diagnostic report and upload it to the asTech server. Those reports that have not been uploaded to the server successfully are stored under **Local Reports** in **App Settings**.
- Diagnostic Plan:** Figures out the diagnostic plan and repair solutions for the detected DTCs.

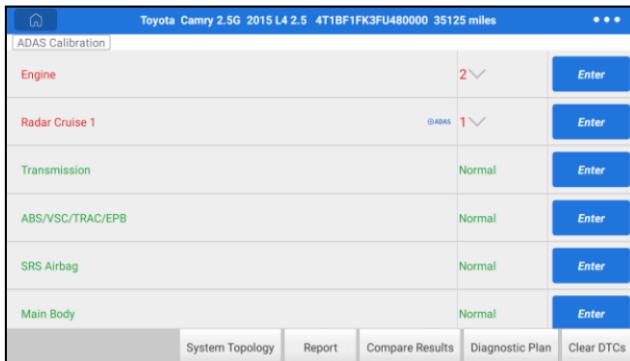


- **Clear DTCs:** Tap to clear the existing diagnostic trouble codes.

System Scan: Tap to quickly scan which systems are installed on the vehicle.

Select Detection: Select certain system manually and tap it to start scanning the system.

- 2) While in System List mode, different highlight bars indicate different detection status.



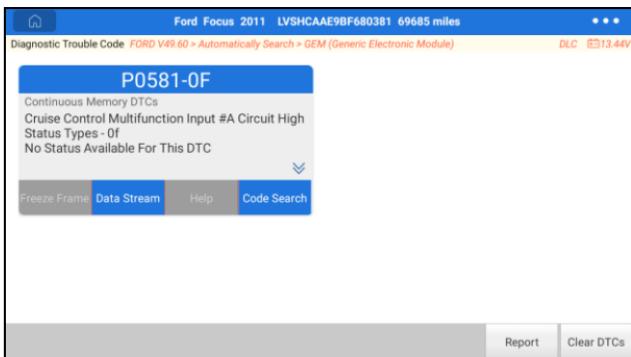
- **Enter:** Select certain system, and tap it to enter the diagnostic function selection screen.



In general, the diagnostic functions vary with different vehicle models. It mainly includes the following options:

A. Read Fault Code

This function displays the detailed information of DTC records retrieved from the vehicle's control system.



On-screen Buttons:

Freeze Frame: Tap to check the snapshot of the operating conditions when the DTC is set.

Help: Tap to view the help information.

Code Search: Tap to search for more information about the current DTC online.

Report: Tap to save the test result as a diagnostic report and upload it to the asTech server. Those reports that have not been uploaded to the server successfully are stored under **Local Reports** in **App Settings**.

Clear DTCs: Tap to clear the existing diagnostic trouble codes.

B. Clear Fault Code

After reading the retrieved codes from the vehicle and certain repairs have been carried out, you can use this function to erase the codes from the vehicle. Before performing this function, please be sure the vehicle's ignition key is in the ON position with the engine off.

Clearing DTCs does not fix the problem(s) that caused the code(s) to be set. If proper repairs to correct the problem that caused the code(s) to be set are not made, the code(s) will appear again and the check engine light will illuminate as soon as the problem that cause the DTC to set manifests itself.

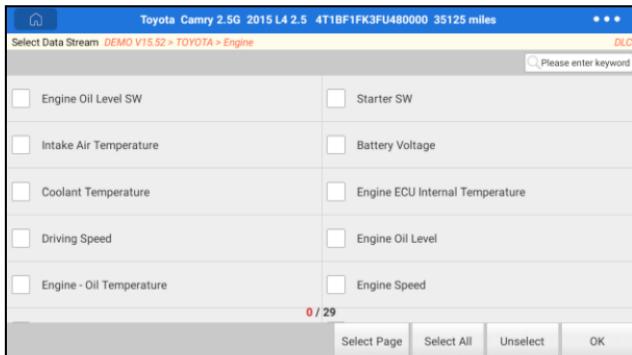
Note: After clearing, you should retrieve trouble codes once more or turn ignition on and retrieve codes again. If there are still some trouble codes in the system, please troubleshoot the code using a factory diagnosis guide, then clear the code and recheck.

C. Read Data Stream

This option lets you view and capture (record) real-time Live Data. This data including current operating status for parameters and/or sensor information can provide insight on overall vehicle performance. It can also be used to guide vehicle repair.

Note: If you must drive the vehicle in order to perform a troubleshooting procedure, ALWAYS have a second person help you. Trying to drive and operate the diagnostic tool at the same time is dangerous, and could cause a serious traffic accident.

Tap **Read Data Stream**, the following screen will appear:



On-screen Buttons:

Select Page: Tap to select all items of the current page. To select certain data stream item, just check the box before the item name.

Select All: Tap to select all items.

Unselect: Tap to deselect all data stream items.

OK: Tap to confirm and jump to the next step.

After selecting the desired items, tap **OK** to enter the data stream reading page.

Name	T	Value	English	Metric
Battery Voltage		11.86	V	▼
Coolant Temperature		203.072	degree F	
Driving Speed		0	mph	
Engine - Oil Temperature		224.6	degree F	
Engine ECU Internal Temperature		181.004	degree F	

Buttons at the bottom: Compare Sample, Save Sample, Graph, Report, Record.

Notes:

1. Tap to set different display style for each selected item. B indicates this item will be displayed in **Bold**. A indicates this item will be displayed in **Red**.

2. Tap **English** or **Metric** to switch the measurement unit.
3. If the value of the data stream item is out of the range of the standard (reference) value, the whole line will display in red. If it complies with the reference value, it displays in blue (normal mode).
4. The indicator 1/X shown on the bottom of the screen stands for the current page/total page number. Swipe the screen from the right/left to advance/return to the next/previous page.

There are 3 types of display modes available for data viewing, allowing you to view various types of parameters in the most suitable way.

Value – this is the default mode which displays the parameters in texts and shows in list format.

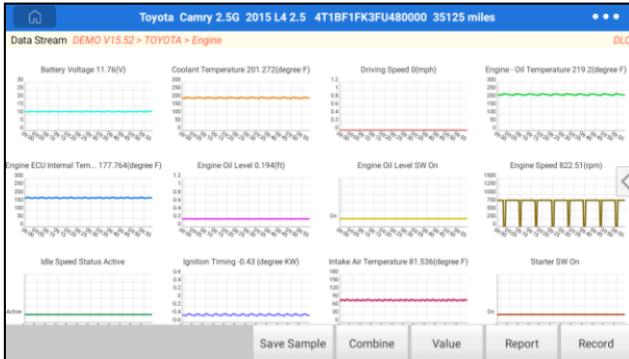
Graph – displays the parameters in waveform graphs.

Combine – this option is mostly used in graph merge status for data comparison. In this case, different items are marked in different colors.

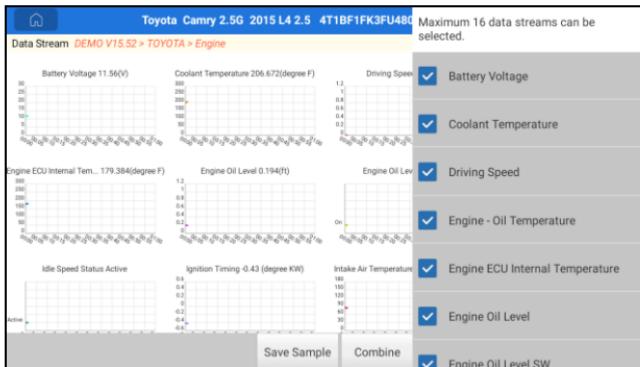
On-screen Buttons:

 **(Single graph):** Tap to view the waveform of the current data stream item.

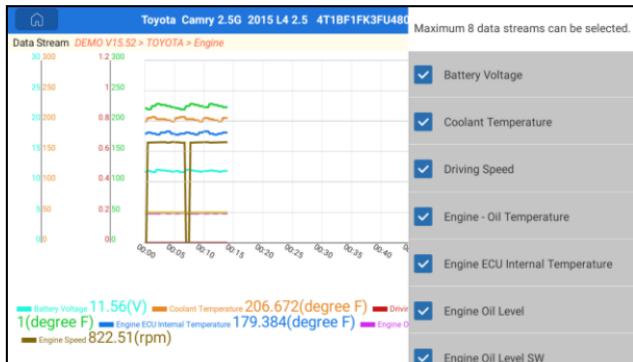
Graph: Tap to view the waveforms of all running data stream items.



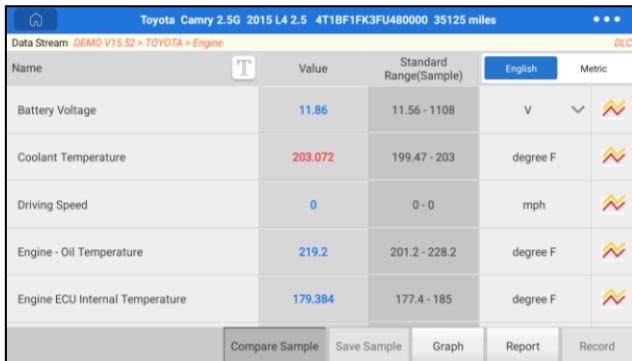
- **Combine:** This option is mostly used in graph merge status for data comparison.



- **Value:** Tap to display the parameters in texts.
- **Customize (☒):** Tap it, a pull-down list of the data stream items appears on the screen. Select/deselect the desired items and then screen will display/remove the waveforms corresponding to these items immediately.



Compare Sample: Tap it to select the sample data stream file, the values you customized and saved in process of data stream sampling will be imported into the **Standard Range** column for your comparison.



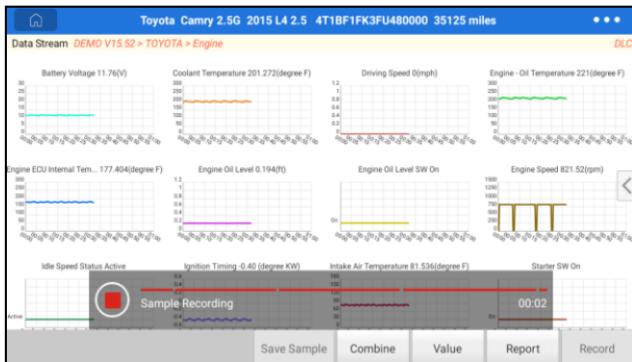
Name	Value	Standard Range(Sample)	English	Metric
Battery Voltage	11.86	11.56 - 1108	V	✓
Coolant Temperature	203.072	199.47 - 203	degree F	✓
Driving Speed	0	0 - 0	mph	✓
Engine - Oil Temperature	219.2	201.2 - 228.2	degree F	✓
Engine ECU Internal Temperature	179.384	177.4 - 185	degree F	✓

Buttons at the bottom: Compare Sample, Save Sample, Graph, Report, Record.

Note: Before executing this function, you have to sample the values of data stream items and save it as a sample data stream file.

Save Sample: This item enables you to customize the standard range of live data stream items and save it as data sample file. Each time you run the data stream items, you can call out the corresponding sample data to overwrite the current standard range.

Tap it to start recording the sample data (*Only data stream items with units will be recorded).



Once recording is complete, tap  to stop it and navigate to the data modification screen.

Name	Min Value	Max Value	Unit
Engine ECU Internal Temperature	80.78	85	degree C
Engine Oil Level	58.67	65	mm
Engine Speed	821.52	825.54	rpm
Ignition Timing	-0.43	-0.38	degree KW
Intake Air Temperature	27.52	29.82	degree C

Tap the Min./Max. value to change it. After modifying all desired items, tap **Save** to save it as a sample data stream file. All data stream files are stored in **App Settings -> Sample**.

D. Read Freeze Frame

This option takes the snapshot of the operating conditions when an emission-related fault occurs.

E. Actuation Test

This option is used to access vehicle-specific subsystem and component tests. Available test vary by vehicle manufacturer, year, and model.

During the actuation test, the tablet outputs commands to the ECU in order to drive the actuators, and then determines the integrity of the system or parts by reading the ECU data, or by monitoring the operation of the actuators, such as switching a injector between two operating states.

On the diagnostic function selection screen, tap **Actuation Test**, the following screen will appear:



Simply follow the on-screen instructions and make appropriate selections to complete the test.

Each time when an operation is successfully executed, *Completed* displays.

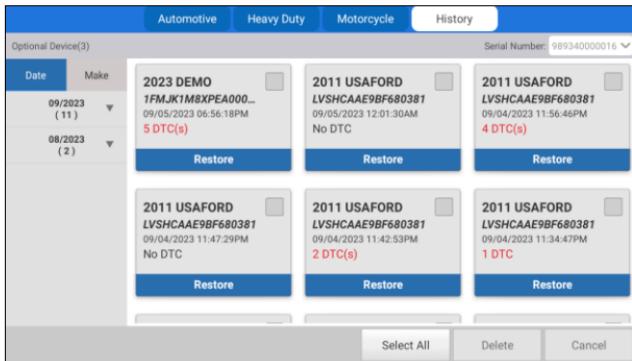
F. Special Functions

It offers coding, reset, relearn and more service functions, to help vehicles get back to functional status after repair or replacement. Available tests vary by vehicle manufacturer, year, and model.

5.3 Diagnostic History

Generally once a vehicle diagnosis is performed, the tablet will record the every details of diagnostic process. The History function provides direct access to the previously tested vehicles and users can resume from the last operation, without starting from scratch.

Tap **History** on the Diagnose main menu screen, all diagnostic records will be listed on the screen in date sequence.



- Tap certain vehicle model to view the details of the last diagnostic report.
- To delete certain diagnostic history, select it and then tap **Delete**. To delete all historical records, tap **Select All** and then tap **Delete**.
- Tap **Quick access** to directly navigate to the function selection page of last diagnostic operation. Choose the desired option to proceed.

5.4 Diagnostic Feedback

This item allows you to feedback your diagnostic problems to us for analysis and troubleshooting.

Tap **Diag Feedback**, the following 3 options will be displayed on the screen.

A. Feedback

Tap certain tested vehicle model to enter the feedback screen.

- 1) Tap **Choose File** to open the target folder and choose the desired diagnostic logs.
- 2) Choose the failure type and fill in the detailed failure description in the blank text box and telephone or email address. After inputting, tap **Submit Result** to send it to us.

B. History

Tap it to view all diagnostic feedback records. Different process states are marked with different colors.

C. Offline list

Tap it to display all diagnostic feedback logs which have not been submitted successfully due to network failure. Once the handset gets a stable network signal, it will be uploaded to the remote server automatically.

6 Service Functions

It offers coding, reset, relearn and more service functions, to help vehicles get back to functional status after repair or replacement. Available tests vary by vehicle manufacturer, year, and model.

Due to continuing improvements, the available service functions are subject to change at any time. To enjoy more service functions, you are suggested to check for updates on a regular basis.

7 I/M Readiness

An important part of a vehicle's OBD II system is the Readiness Monitors, which are indicators used to find out if all of the emissions components have been evaluated by the OBD II system. They are running periodic tests on specific systems and components to ensure that they are performing within allowable limits.

Currently, there are eleven OBD II Readiness Monitors (or I/M Monitors) defined by the U.S. Environmental Protection Agency (EPA). Not all monitors are supported in every vehicles and the exact number of monitors in any vehicle depends on the motor vehicle manufacturer's emissions control strategy.

Continuous Monitors - Some of the vehicle components or systems are continuously tested by the vehicle's OBD II system, while others are tested only under specific vehicle operating conditions. The continuously monitored components listed below are always ready:

- 1) Misfire
- 2) Fuel System
- 3) Comprehensive Components (CCM)

Once the vehicle is running, the OBD II system is continuously checking the above components, monitoring key engine sensors, watching for engine misfire, and monitoring fuel demands.

Non-Continuous Monitors - Unlike the continuous monitors, many emissions and engine system components require the vehicle to be operated under specific conditions before the monitor is ready. These monitors are termed non-continuous monitors and are listed below:

- 1) EGR System
- 2) O₂ Sensors
- 3) Catalyst
- 4) Evaporative System
- 5) O₂ Sensor Heater
- 6) Secondary air Injection
- 7) Heated Catalyst

8) A/C system

I/M refers to Inspection and Maintenance that is legislated by the Government to meet federal clean-air standards. I/M Readiness indicates whether or not the various emissions-related systems on the vehicle are operating properly and are ready for Inspection and Maintenance testing.

The purpose of the I/M Readiness Monitor Status is to indicate which of the vehicle's Monitors have run and completed their diagnosis and testing, and which ones have not yet run and completed testing and diagnosis of their designated sections of the vehicle's emissions system.

The I/M Readiness Monitor Status function also can be used (after repair of a fault has been performed) to confirm that the repair has been performed correctly, and/or to check for Monitor Run Status.

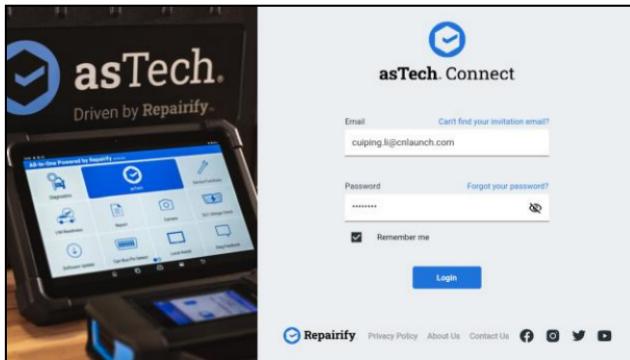
Tap **I/M Readiness** on the Job Menu to start checking the readiness. After checking all I/M readiness status, the screen will output the result.

Monitor	Value	Monitor	Value
Misfire	☒	Fuel System	●
Comprehensive Component	☒	Catalyst	☒
Heated Catalyst	☒	Evaporative System	●
Secondary Air Injection	●	O2 Sensor	●

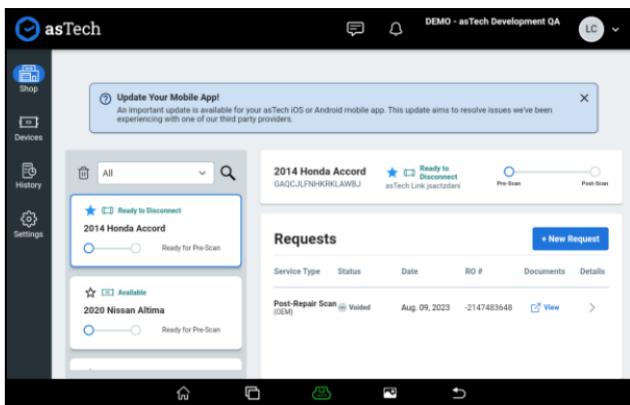
 Note:  means not available on this vehicle,  means incomplete or not ready,  means Completed or Monitor Ok.

8 Reports

This option provides a quick access to Shop module of the asTech app. Tap it, the following screen will appear:



Input your AsTech app user account and tap **Login** to enter.



9 Software Update

This module enables you to update the diagnostic software & App and frequently used software.

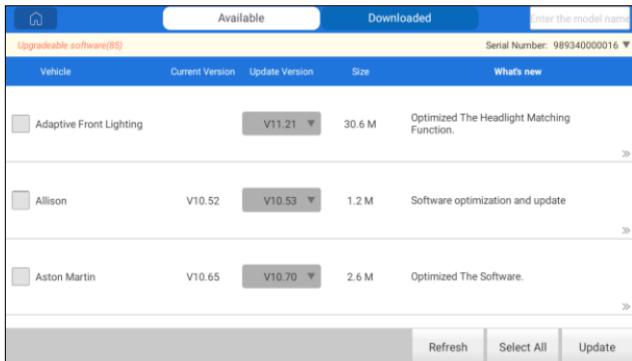
9.1 Update Diagnostic Software & APP

Go to **Software Update** on the Job Menu and tap the **Downloaded** tab.

The **Available** tab displays a list of software that can be updated. Under it, all software is categorized into three kinds:

- **Common software:** mainly includes some common apps that are associated with the diagnostic app. The software of this kind always stays at the top of the list, which can be deselected manually (excluding the system app, such as firmware and ECU aid).
- **Frequently used vehicle software:** refers to the diagnostic software that is frequently used, including the vehicle diagnostic software and Reset software. It is generally displayed following the **Common software** list.
- **Other vehicle software:** refers to the diagnostic software that is rarely used or never used. It is generally displayed following the **Frequently used software** list.

- 1). If the user does not download any diagnostic software during the sign-up process, all diagnostic software is selected by default. Tap **Update** to start downloading.
- 2). If the user downloaded all/some vehicle software during the sign-up process and had it serviced for a long period of time, only the frequently used software is selected. Tap **Update** to start downloading. Other vehicle software that is rarely used will also be listed under the **Available** tab, but it is not selected at default.

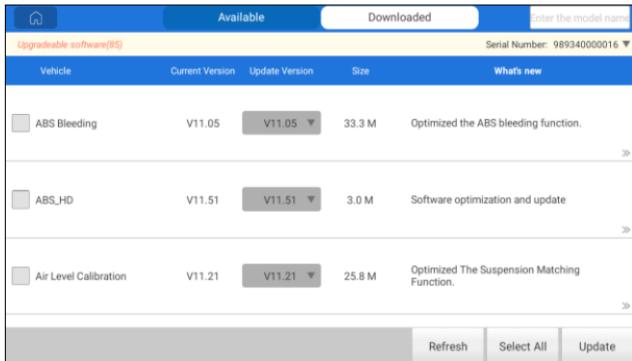


To download certain software that is not frequently used, check the box before the vehicle model. Tap **Update** to start downloading.

Once download is finished, the software packages will be installed automatically.

9.2 Update Frequently Used software

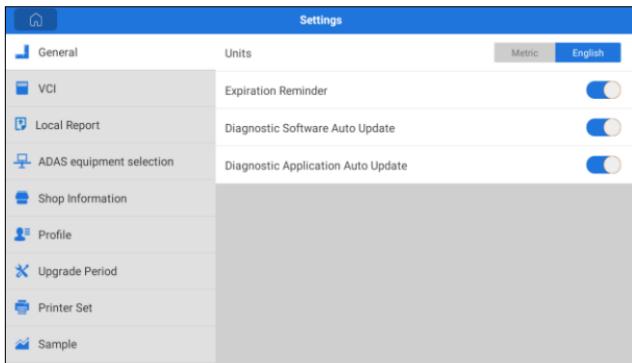
If the user only intends to update the frequently used software, go to **Software Update** and tap the **Downloaded** tab.



Tap **Update** to start downloading. Once download is finished, the software packages will be installed automatically.

10 App Settings

This function allows users to make some setting of the application.



10.1 General

1). Units

It is designed to set the measurement unit. Metric System and English System are available.

2). Expiration Reminder

This option is designed to turn on/off the automatic diagnostic software update function. If set as ON, the system will automatically update the available diagnostic software when the tablet has a network connection and a newer version is detected.

3). Diagnostic Software Auto Update

This option is used to set whether automatic diagnostic software update function is ON.

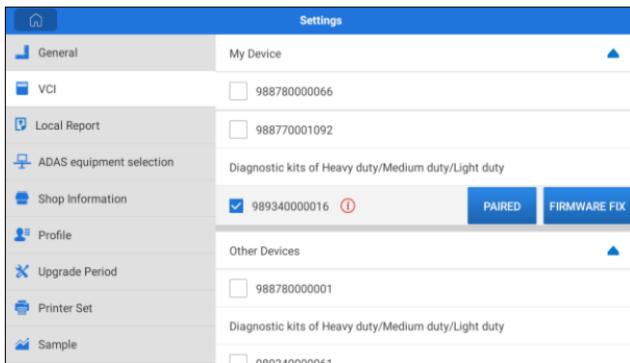
4). Diagnostic Application Auto Update

This option is used to set whether automatic diagnostic app update function is ON.

10.2 VCI

If several VCI devices are activated on this tool, a list of VCI devices will be displayed on the screen.

Once you choose the device that belongs to other account, you have to log out, and then input the right account to continue.



- If you use another VCI to test a vehicle, select the desired checkbox and tap **Pair** to pair it with the tablet.
- If the current VCI comes across communication failure, tap **Firmware Fix** to update and fix the diagnostic firmware. During fixing, please do not cut power or switch to other interfaces.
- If you use the current account to test a vehicle with another tablet, tap **Paired** to unpair the VCI device with the previously paired tablet.
- If you bought a new VCI device, tap **Activate VCI** to activate it.

Note: please be sure to keep the VCI powered on while performing the operation.

10.3 Local Report

This feature allows you to upload or delete the local diagnostic reports that have not been uploaded to the server due to network connection failure.

10.4 ADAS Equipment Selection

This feature allows you to download and check updates for vehicle calibration

files of the corresponding ADAS calibration equipment.

10.5 Shop Information

This option lets you define your print information.

Once you saved the print information, it will be entered automatically in the *More Information* box every time you save the diagnostic report.

10.6 Profile

Use this item to view and configure personal information.

10.7 Upgrade Period

This feature allows you to check the upgrade period details of the diagnostic software.

10.8 Printer Set

This option is designed to establish a wireless connection between the tablet and the Wi-Fi printer (sold separately) while performing printing operations.

The App is compatible with the *Repairify Wi-Fi Printer* (sold separately) and *System* (external printer).

For Repairify Wi-Fi mini printer, follow the instructions described in the user manual included with the Wi-Fi mini printer to configure it.

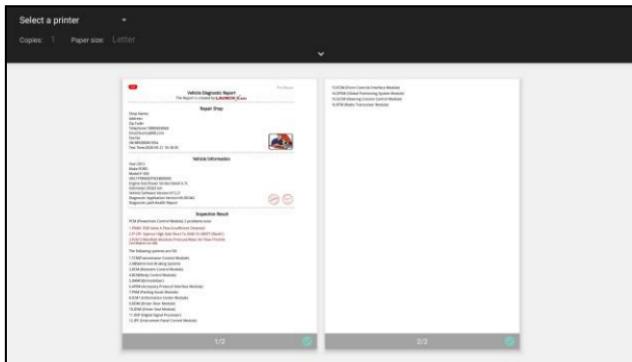
For other Wi-Fi printers,

Before printing, make sure the following conditions are met:

- The Wi-Fi printer is powered on and working normally.
- The print service plug-in associated with the printer is already installed on the tablet (Go to Google Play or use the Browser to download and install it).

Follow the steps below to proceed:

1. Set the default printer as **System**.
2. Go to **Settings -> Network & Internet -> WLAN**, set the WLAN switch to Off.
3. On the report details page, tap .
4. Touch  next to **Select a printer** on the upper left corner of the screen.



5. Select **All Printers** -> **Add printer** and enable the installed printer service, the system starts searching for all available Wi-Fi printers of the brand.



6. Select the desired Wi-Fi printer from the list. If the chosen Wi-Fi printer hotspot is open, the tablet can connect it directly. If it is encrypted, a password may be required. Refer to the Wi-Fi printer user manual to get the default password.
7. Now the printer is ready for printing.
8. Alternatively, you can also choose **Save as PDF** to save the current diagnostic report as a PDF file for later printing.

10.9 Sample

This feature allows you to manage the recorded data stream sample files.

10.10 Backup/Restore

This option lets you backup/restore the important in-app data to/from external storage device.

10.11 Change Password

This item allows you to modify your login password.

10.12 Clear Cache

This option allows you to clear the App cache. Clearing the cache will restart the App.

10.13 Login/Logout

To logout the current user ID, tap **Logout**.

To login the system again, tap **Login**.

12 FAQ

12.1 About Diagnostic Tablet

1. How to save power?

1. Please turn off the screen while the tool keeps idle.
2. Set a shorter standby time.
3. Decrease the brightness of the screen.
4. If WLAN connection is not required, please turn it off.

2. Communication error with vehicle ECU?

Please confirm:

1. Whether the VCI device is correctly connected.
2. Whether ignition switch is ON.
3. If all checks are normal, send vehicle year, make, model and VIN number to us using Feedback feature.

3. Failed to enter into vehicle ECU system?

Please confirm:

1. Whether the vehicle is equipped with this system.
2. Whether the VCI device is correctly connected.
3. Whether ignition switch is ON.
4. If all checks are normal, send vehicle year, make, model and VIN number to us using Feedback feature.

4. How to reset the tablet?

Warning: Resetting may cause data loss. Before doing so, please make sure important data and information has been backed up.

Do the following to reset the tablet:

1. Tap **Settings -> System -> Reset options**.
2. Tap **Erase all data (factory reset)**.
3. Tap **RESET TABLET**.

4. Tap **ERASE EVERYTHING** to start resetting until the tool automatically reboots.

5. How to download the diagnostic app after resetting the tablet?

Note: Before registration, please make sure the network is properly connected.

After the tablet has been successfully reset, follow the steps below to download the App:

1. Launch the browser and the default official Launch website opens (If a blank page pops up, just type in www.x431.com in the input bar).
2. Tap **Login**, input the username and password and tap **Log In**.
3. Make sure that the serial number is correct, tap **APP application program** and tap the Download icon to start downloading.
4. After the download is complete, follow the on-screen instructions to install it.
5. After installation, use the existing username and password to login and go to update center to download the diagnostic software.

6. What to do if the language of vehicle diagnostic software does not match the system language?

English is the default system language of the tool. After the system language is set to the preference language, please go to the update center to download the vehicle diagnostic software of the corresponding language.

If the downloaded diagnostic software is still displayed in English, it indicates that the software of the current language is under development.

7. How to retrieve the login password?

Please follow below steps to proceed in case you forgot the login password:

1. Tap the application icon on the home screen to launch it.
2. Tap **Login** on the upper right corner of the screen.
3. Tap **Retrieve password**.
4. Input product S/N and follow the on-screen prompts to retrieve the password.

12.2 About asTech

1. What's network conditions is required for asTech remote diagnostics?

The remote operation requires a network broadband of 100 MB or above.

2. What does the word “Delay” displayed on the VCI screen mean?

The Delay (network delay) indicates the state of the network communication, which can be regarded as a reference since different vehicles require different delays. Different colors represent different delay status. There are three states of network delay:

Green: Indicates a shorter network delay. In this case, it has a higher success rate of remote communication.

Yellow: Indicates a medium network delay. In this case, it has a medium success rate of remote communication.

Red: Indicates a longer network delay. In this case, it has a lower success rate of remote communication and remote ECU reprogramming operations are not suggested.

3. My network delay is so long.

Please check the following possible reasons:

1. The greater distance between the **SmartLink B2.0/SmartLink B** and **SmartLink C V2.0 dongle** causes a longer network delay.
2. There are too many network communication nodes that the data communication passes by, which may cause a longer network delay.
3. Check if the network is poor and data communication speed is slow.

4. Some systems of some old vehicles cannot be tested.

The **SmartLink C V2.0 dongle** supports CAN2.0/CANFD/DIOP communication protocols, but some old vehicle uses K-Line communication protocol.

5. Is it necessary to re-ignite the car after the diagnostic system starts working?

For the sake of some vehicle's conditions, the re-ignition will provide you a more detailed analysis after OBD diagnosis.